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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	**Applicant(s)**
Office Action Summary		09/660,867	FOSTER ET AL.
		Examiner	**Art Unit**	
		Johnny Ma	2614	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 January 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 1/3/2005 have been fully considered but they are not persuasive.

Regarding claim 1, Applicant argues Movshovich does not teach the feature: "the string comparator comparing transport stream data from the data unloader to at least a portion of a compare value filter." Applicant asserts "[t]he Examiner alleges that the following quote from Movshovich, col. 9, lines 48-63 teaches the preceding feature of claim 1." However, the respectfully submits that Applicant has mischaracterized the rejection of claim 1. As discussed in the previous Office Action, "[t]he claimed "transport demultiplexor delivering transport stream data to a data unloader" is met by packet framer forwarding data to the PID match unit 304 (Movshovich 6:46-58)... The claimed "string comparator comparing transport stream data from the data unloader to at least a portion of the compare value filter" is met by PID match unit comprising extracted PID information from the transport packets of the transport stream with known PID table entries (Movshovich 8:32-36)." The PID match unit receives transport stream data from the data unloader [packet framer], the transport stream data [transport packets] is then compared to PID table entries, a comparison of at least a portion of the PID values.

Applicant further argues "Movshovich does not teach the feature: 'the string comparator...storing a destination address of the transport stream data when the compared transport stream data matches the at least a portion of the compare value filter." The Examiner respectfully disagrees, as cited by the Applicant and in the previous Office Action, the Movshovich reference discloses a PID match unit for locating transport packets with matching

PIDs (Movshovich 7:43-57) wherein "...the counter value on path 384 represents an address index which can be used to address particular memory queues corresponding to information identified by its PID. The address index can be used by a processing unit to generate a physical memory address where the particular transport packet will ultimately be stored prior to transmission to decoding units. The use of the address index in the local header allows a destination location to be designated without the need to develop the complete address until it is necessary to actually write the transport packet to its corresponding memory queue" (Movshovich 9:48-63). The address index is stored as evidenced by "[u]nder a match condition, the match capture latch 380 stores the PID location address from the PID match table 366 (counter 368 value)...in the following format to be forwarded to the local header unit:" (Movshovich 10:6-10) wherein the local header also stores the address index (Movshovich, see Table 3. Furthermore, the storing occurs after a match is detected, meeting the claimed" when the compared transport stream data matches the at least a portion of the compare value filter." Also note, the Movshovich reference discloses that the address index designates a destination location, thus the Examiner respectfully disagrees with Applicant's assertion that the address index and claimed destination address are not equivalent.

Regarding claim 11, Applicant asserts Movshovich does not teach the feature: "1) a compare register, the compare register storing at least one compare value filter; ii) a masking register, the masking register designating at least a portion of the compare value filter." The Examiner agrees that "[i]n analyzing 'a compare register, the compare register storing at least one compare value filter', the Examiner alleges that PID table of 32 PID entries stored in RAM (as disclosed in Movshovich, col. 7, lines 58-61) represents the 'at least one compare value filter'

of claim 11." However, the examiner respectfully disagrees that "Movshovich...does not teach

the PID mask register 362 designates at least a portion of the PID table of 32 PID entries stored

in RAM, as required in order for the Examiner's argument to be logically consistent." As

discussed in the previous Office Action, the making register of claim 11 is represented by PID

mask register 362 for obtaining only the relevant bits for the comparison (Movshovich, col. 8,

line 64 – col. 9, line 24). The masking register designates at least a portion of the compare value

filter wherein the masking operation obtains the relevant bits for the comparison (Movshovich

9:2-4), as a result values in the PID table are designated to perform the comparison (Movshovich

9:25-47).

Applicant also argues Movshovich does not teach the "comparing" operation required by the

preceding feature of claim 11. The Examiner respectfully disagrees, as cited by Applicant and in

the previous Office Action, this limitation is met by "...the counter value on path 384 represents

an address index which can be used to address particular memory queues corresponding to

information identified by its PID. The address index can be used by a processing unit to generate

a physical memory address where the particular transport packet will ultimately be stored prior to

transmission to decoding units. The use of the address index in the local header allows a

destination location to be designated without the need to develop the complete address until it is

necessary to actually write the transport packet to its corresponding memory queue"

(Movshovich 9:48-63). The comparing operation is met by information identified by its PID,

wherein PID's are identified by PID match unit (Movshovich 9:48-67). Furthermore, the

Examiner respectfully submits that the Movshovich reference also teaches that the string

comparator compares the other transport stream data from the data unloader to the designated at

least a portion of the PID table of 32 PID entries stored in RAM wherein information is

identified by its PID, PID match unit comparing extracted PID information from the transport

packets of the transport stream with known PID table entries (Movshovich 8:32-36).

Applicant also contends that it is not necessary and inevitable to temporarily store the packet

data in a buffer that exists within the demultiplexor in order for the framer 302 to perform its

functionality. The Examiner respectfully disagrees, the Movshovich reference discloses "[t]he

packet framer 302 locates the synchronization byte among the rest of the transport data byte

stream by tracking the arrival of synchronization bytes every transport packet interval. This is

controlled by registers which establish the conditions under which the framer enters and exits a

synchronization lock condition. The framer 302 forwards the data to the PID match unit 304

when an entire transport packet has been delineated by the transport data stream" (Movshovich

6:52-65). By holding the data until an entire transport packet has been delineated, and then

forwarding the data to the PID match unit, it is "necessary and inevitable" to temporarily store

the packet in data to perform this functionally. Also note that the packet framer resides in the

MPEG-2 transport demultiplexor (Movshovich 5:31-60).

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-5, 7-13, 15, and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated

by Movshovich et al. (US 6,434,170 B1).

        As to claim 1, note the Movshovich et al. reference that discloses a memory-based

circular queue with local descriptive information to implement a storage area for filtering

MPEG-2 packets that are distributed and/or processed under the control of a host microprocessor

by a direct memory access mechanism. The claimed "transport multiplexor" is met by mpeg-2

transport stream demultiplexing system (Movshovich 4:64). The claimed "transport multiplexor

selectively receiving a transport stream" is met by "satellite, cable and terrestrial demodulators to

receive the transport packets" (Movshovich 5:11-13). The claimed "transport demultiplexor

delivering transport stream data to a data unloader" is met by packet framer forwarding data to

the PID match unit 304 (Movshovich 6:46-58). The claimed "and wherein the transport

demultiplexor includes a string comparator" is met by the "PID match unit 304 locates transport

packets with matching PIDs, and forwards them to the local header unit 320" (Movshovich 7:43-

57). The claimed "string comparator comparing transport stream data from the data unloader to

at least a portion of the compare value filter" is met by PID match unit comprising extracted PID

information from the transport packets of the transport stream with known PID table entries

(Movshovich 8:32-36). The claimed "and storing a destination address of the transport stream

data when the compared transport stream data matches the at least a portion of the compare value

filter" is met by PID match unit for locating transport packets with matching PIDs (Movshovich

7:43-57) wherein "…the counter value on path 384 represents an address index which can be

used to address particular memory queues corresponding to information identified by its PID.

The address index can be used by a processing unit to generate a physical memory address where

the particular transport packet will ultimately be stored prior to transmission to decoding units.

The use of the address index in the local header allows a destination location to be designated

without the need to develop the complete address until it is necessary to actually write the

transport packet to its corresponding memory queue" (Movshovich 9:48-63).

As to claim 2, the claimed "wherein the string comparator includes a compare register,

wherein the compare register stores the at least one compare value filter" is met by PID match

unit includes a PID table of 32 PID entries stored in RAM (Movshovich 7:58-61).

As to claim 3, the claimed "wherein the compare register receives the compare value

filter from a system processor" is met by PID match unit PID table updated by the host processor

(Movshovich 7:61-62).

As to claim 4, the claimed "wherein the compare register stores a plurality of compare

value filters, with each of the compare value filters compared to transport stream data

corresponding to a different memory queue" is met by the PID match unit PID table of 32 PID

entries (Movshovich 7:58-61) wherein an address index is used to write the transport packet to

its corresponding memory queue (Movshovich 9:52-63).

As to claim 5, the claimed "wherein the string comparator includes a masking register

and wherein the masking register includes at least one masking filter, wherein the at least one

masking filter determines the at least one portion of the compare value filter that is compared to

the transport stream data" is met by PID mask register 362 for obtaining only the relevant bits for

the comparison (Movshovich 8:64 – 9:24).

As to claim 7, the claimed "wherein the string comparator includes an address register

and wherein the address register stores the destination address of matching transport stream data"

is met by "[u]nder a match condition, the match capture latch 380 stores the PID location address from the PID match table 366 (counter 368 value), the match information on line 390, and the PID attribute bits in the following format to be forwarded to the local header unit" (Movshovich 10:6-10) where local header unit reads the PID match attribute bits and stores the transport packet in local header latency FIFO 412 (Movshovich 10:34-59).

As to claim 8, the claimed "wherein the address register stores a plurality of destination addresses in a first-in-first- buffer" is met by the local header latency FIFO as discussed in the rejection of claim 7.

As to claim 9, the claimed "wherein the transport stream comprises an MPEG-2 transport stream" is met by the use of MPEG-2 transport streams (Movshovich 4:64).

As to claim 10, the claimed "wherein the string comparator notifies a system processor when the compared transport stream data matches the at least a portion of the compare value filter" is met by PID match unit detecting matching packets and forwarding to local header unit (Movshovich 10:6-10) wherein the system processor is notified when system processor extracts information found within the local header of each data packet for creating DMA instructions (Movshovich 13:3-11).

As to claim 11, note the Movshovich et al. reference that discloses a memory-based circular queue with local descriptive information to implement a storage area for filtering MPEG-2 packets that are distributed and/or processed under the control of a host microprocessor by a direct memory access mechanism. The claimed "front end logic" is met by "[t]he packet management circuit 300 represents the transport front end, where transport packets are received at the MPEG-2 transport demultiplexor from an input channel or demodulator unit" (Movshovich

6:40-45). The claimed "packet buffer" is met by "[g]enerally, the packet framer 302 performs

packet framing and byte alignment, as well as synchronization detection. The packet framer 302

continuously searches for the MPEG synchronization bye in the header of the incoming transport

data stream...The framer 302 forwards the data to the PID match unit 304" (Movshovich 6:46-

65) wherein it is inherent that the packet framer temporarily store incoming data for successful

detection of synchronization and forwarding of data to PID match unit. The claimed "video

unloader" is met by DMA controller 804 and video queue (Movshovich 13:1-24). The claimed

"data unloader" is met by is met by MUX 310 unloading transport stream data to PID match unit

304 comprising extracted PID information from the transport packets of the transport stream

with known PID table entries (Movshovich 8:32-36, also see Figure 3). The claimed "audio

unloader" is met by DMA controller 804 and audio queue (Movshovich 13:1-24). The claimed

"and wherein said front logic receives the transport stream and delivers the transport stream to

the packet buffer" is met by packet management circuit 300 receiving transport packets from an

input channel or demodulator unit wherein packet framer, including packet buffer as discussed

above, receives the transport packets for processing (Movshovich 6:40-65). The claimed "and

wherein said packet buffer delivers selected transport stream video data to the video unloader

and selected transport audio data to the audio unloader, and wherein the said packet buffer

delivers other transport stream data to the data unloader for delivering to system memory" is met

by the packet framer 302 unloading/delivering data PID match unit 304 and concatenator, as

illustrated in Figure 3, wherein data is further transferred to Sky queue, analyzed, and transferred

to various separate queues in memory including a video queue and audio queue by Transport

DMA controller 804 (Movshovich 12:62-13:11). The claimed a string comparator including "a

compare register, the compare register storing at least one compare value filter" is met by PID

match unit including a PID table of 32 PID entries stored in RAM (Movshovich 7:58-61)

wherein PID match unit includes comparators (Movshovich 9:30-31). The claimed "a masking

register, the masking register designating at least a portion of the compare value filter" is met by

PID mask register 362 for obtaining only the relevant bits for the comparison (Movshovich 8:64

9:24). The claimed "address register" is met by "[u]nder a match condition, the match capture

latch 380 stores the PID location address from the PID match table 366 (counter 368 value), the

match information on line 390, and the PID attribute bits in the following format to be forwarded

to the local header unit" (Movshovich 10:6-10). The claimed "wherein the string comparator

compares the other transport stream data from the data unloader to the designated at least a

portion of the compare value filter and stores a destination address of the other transport stream

data at the address register when the compared other transport stream data matches the

designated at least a portion of the compare value filter" is met by "...the counter value on path

384 represents an address index which can be used to address particular memory queues

corresponding to information identified by its PID. The address index can be used by a

processing unit to generate a physical memory address where the particular transport packet will

ultimately be stored prior to transmission to decoding units. The use of the address index in the

local header allows a destination location to be designated without the need to develop the

complete address until it is necessary to actually write the transport packet to its corresponding

memory queue" (Movshovich 9:48-63).

As to claim 12, the claimed "wherein the compare register receives the compare value filter from a system processor" is met by PID match unit PID table updated by the host processor (Movshovich 7:61-62).

As to claim 13, the claimed "wherein the compare register stores a plurality of compare value filters, with each of the compare value filters compared to system data corresponding to a different memory queue" is met by the PID match unit PID table of 32 PID entries (Movshovich 7:58-61) wherein an address index is used to write the transport packet to its corresponding memory queue (Movshovich 9:52-63).

As to claim 15, the claimed "wherein the address register stores a plurality of destination addresses in a first-in-first-out buffer" is met by where local header unit reads the PID match attribute bits and stores the transport packet in local header latency FIFO 412 (Movshovich 10:34-59).

As to claim 17, the claimed "wherein the data unloader includes a queue control, said queue control controlling storage location of said first transport stream system data in system memory" is met by "[t]he data packets are transferred from the Sky Queue to the appropriate queue by the Transport DMA controller 804" (Movshovich 13:3-4).

As to claim 18, the claimed "wherein the transport stream comprises an MPEG-2 transport stream" is met by MPEG-2 transport stream (Movshovich 4:64).

4.   Claims 6, 14, 16, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Movshovich et al. (US 6,434,170 B1) in further view of Temple et al. (US 2003/0147430 A1).

As to claim 6, the claimed "wherein the masking register receives the at least one

masking filter from a system processor." Note the Movshovich et al. reference discloses a PID

mask register for masking to obtain only the relevant bits for the comparison (Movshovich 8:66

– 9:4). Further note, the Movshovich et al. discloses host processor updating tables for

comparison purposes. Also note, the Movshovich et al. reference discloses an MPEG-2 transport

stream demultiplexing system and also transport stream applications and other digital

communication environments (Movshovich 4:55-65) wherein "many of the principles described

herein may also be applied to other digital audio/video communications systems other than those

defined by the MPEG standards" (Movshovich 21:57-67). However, the Movshovich et al.

reference is silent as to system processor updating the masking register. Now note the Temple et

al. reference that discloses a demultiplexor for receiving MPEG type signals and ATM type

signals (Temple [0009]). "Where the signal received by a set top box is a narrowcast signal, the

MPEG-2 TS demultiplexor receives from the ATM termination and data extraction unit, an

MPEG-2 transport stream which contains data corresponding to the required video, audio etc

signal only...the MPEG-2 TS demultiplexor does little more than simply pass the data from its

input to its output" (Temple [0034]). Therefore, the examiner submits that it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the

Movshovich MPEG-2 transport demultiplexor with PID mask register and host processing

programming with the Temple et al. bypass of demultiplexing system when receiving ATM type

signals for the purpose of allowing a user to receive broadcast and narrow cast signals so that

users may have more control over the data being transmitted (Temple [0024-0025]) wherein the

host processor programs PID mask register in manner that allows data to pass through the PID match unit.

As to claim 14, the claimed "wherein the masking register receives the at least one masking filter from a system processor." Note the Movshovich et al. reference discloses a PID mask register for masking to obtain only the relevant bits for the comparison (Movshovich 8:66 – 9:4). Further note, the Movshovich et al. discloses host processor updating tables for comparison purposes. Also note, the Movshovich et al. reference discloses an MPEG-2 transport stream demultiplexing system and also transport stream applications and other digital communication environments (Movshovich 4:55-65) wherein "many of the principles described herein may also be applied to other digital audio/video communications systems other than those defined by the MPEG standards" (Movshovich 21:57-67). However, the Movshovich et al. reference is silent as to system processor updating the masking register. Now note the Temple et al. reference that discloses a demultiplexor for receiving MPEG type signals and ATM type signals (Temple [0009]). "Where the signal received by a set top box is a narrowcast signal, the MPEG-2 TS demultiplexor receives from the ATM termination and data extraction unit, an MPEG-2 transport stream which contains data corresponding to the required video, audio etc signal only...the MPEG-2 TS demultiplexor does little more than simply pass the data from its input to its output" (Temple [0034]). Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Movshovich MPEG-2 transport demultiplexor with PID mask register and host processing programming with the Temple et al. bypass of demultiplexing system when receiving ATM type signals for the purpose of allowing a user to receive broadcast and narrow cast signals so that

users may have more control over the data being transmitted (Temple [0024-0025]) wherein the

host processor programs PID mask register in manner that allows data to pass through the PID

match unit.

As to claim 16, note the Movshovich et al. reference discloses an MPEG-2 transport

stream demultiplexing system and also transport stream applications and other digital

communication environments (Movshovich 4:55-65) wherein "many of the principles described

herein may also be applied to other digital audio/video communications systems other than those

defined by the MPEG standards" (Movshovich 21:57-67). However, the Movshovich et al.

reference is silent as to processing non-mpeg streams. Now note the Temple et al. reference that

discloses a demultiplexor for receiving MPEG type signals and ATM type signals (Temple

[0009]). The claimed "wherein the front end logic includes a bypassable packet parser, the

bypassable packet parser receiving a first and second type of transport stream from the

bypassable synchronizer" is met by "where the signal received by a set top box is a narrowcast

signal, the MPEG-2 TS demultiplexor receives from the ATM termination and data extraction

unit, an MPEG-2 transport stream which contains data corresponding to the required video,

audio etc signal only...the MPEG-2 TS demultiplexor does little more than simply pass the data

from its input to its output" (Temple [0034]). Therefore, the examiner submits that it would have

been obvious to one of ordinary skill in the art at the time the invention was made to modify the

Movshovich MPEG-2 transport demultiplexor with packet framer and synchronizer with the

Temple et al. bypass of demultiplexing system when receiving ATM type signals for the purpose

of allowing a user to receive broadcast and narrow cast signals so that users may have more

control over the data being transmitted (Temple [0024-0025]). The claimed "the bypassable

packet parser filtering the first type of transport stream data before passing to the packet buffer,

the bypassable packet parser delivering second type transport stream data to the packet buffer

without filtering" is met by demultiplexor pass through for ATM type signals (Temple [0034])

wherein MPEG type signals are processed by packet framer (Movshovich 5:52-60).

As to claim 19, the claimed "wherein the string comparator notifies a system processor

when the compared other transport stream data matches the designated at least a portion of the

compare value filter" is met by PID match unit detecting matching packets and forwarding to

local header unit (Movshovich 10:6-10) wherein the system processor is notified when system

processor extracts information found within the local header of each data packet for creating

DMA instructions (Movshovich 13:3-11) wherein, as discussed above, ATM type data would

pass through PID match unit to system processor for directing to proper queues for further

processing.

As to claim 20, note the Movshovich et al. reference that discloses a memory-based

circular queue with local descriptive information to implement a storage area for filtering

MPEG-2 packets that are distributed and/or processed under the control of a host microprocessor

by a direct memory access mechanism. The claimed "packet buffer" is met by "[g]enerally, the

packet framer 302 performs packet framing and byte alignment, as well as synchronization

detection. The packet framer 302 continuously searches for the MPEG synchronization bye in

the header of the incoming transport data stream... The framer 302 forwards the data to the PID

match unit 304" (Movshovich 6:46-65) wherein it is inherent that the packet framer temporarily

store incoming data for successful detection of synchronization and forwarding of data to PID

match unit. The claimed front end logic receiving the MPEG-2 transport stream is met by "[t]he

packet management circuit 300 represents the transport front end, where transport packets are received at the MPEG-2 transport demultiplexor from an input channel or demodulator unit" (Movshovich 6:40-45). The claimed packet parser is met by packet framer 302 connected to PID match unit 304 and local header unit 320, as illustrated in Figure 3 (Movshovich). The claimed "wherein the packet parser retrieves identification information from the MPEG-2 transport · stream and appends packet identification from the retrieved identification information to the MPEG-2 transport packets, the appended packet identification used identify the MPEG-2 transport stream packets as video packets, audio packets or system data packets" is met by "[t]he local header unit 402 creates a unique 'local' header to be inserted at the start of each transport packet, ...[using]the PID match attributes [7:5] from path 404 to build the local header" (Movshovich 10:60-63) wherein data packets are transferred to appropriate queues (video queue, audio queue, TTX queue, a CRC queue, and 1394 interface queue) based on information found within the local header of each data packet (Movshovich 13:1-23). Also note, the Movshovich et al. reference discloses an MPEG-2 transport stream demultiplexing system and also transport stream applications and other digital communication environments (Movshovich 4:55-65) wherein "many of the principles described herein may also be applied to other digital audio/video communications systems other than those defined by the MPEG standards" (Movshovich 21:57-67). However, the Movshovich et al. reference is silent as to processing non-mpeg streams. Now note the Temple et al. reference that discloses a demultiplexor for receiving MPEG type signals and ATM type signals (Temple [0009]). The claimed a bypassable packet parser and bypassable synchronizer is met by "where the signal received by a set top box is a narrowcast signal, the MPEG-2 TS demultiplexor receives from the ATM termination and

data extraction unit, an MPEG-2 transport stream which contains data corresponding to the

required video, audio etc signal only...the MPEG-2 TS demultiplexor does little more than

simply pass the data from its input to its output" (Temple [0034]). Therefore, the examiner

submits that it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the Movshovich MPEG-2 transport demultiplexor with packet

framer and synchronizer with the Temple et al. bypass of demultiplexing system when receiving

ATM type signals for the purpose of allowing a user to receive broadcast and narrow cast signals

so that users may have more control over the data being transmitted (Temple [0024-0025]).

The claimed "a video unloader, the video unloader receiving selected MPEG-2 video packets

from the packet buffer" is met by DMA controller 804 and video queue (Movshovich 13:1-24)

receiving data form packet framer 208. The claimed "an audio unloader, the audio unloader

receiving selected MPEG-2 audio packets from the packet buffer" is met by DMA controller 804

and audio queue (Movshovich 13:1-24) receiving data form packet framer 208. The claimed

"data unloader, the data receiving MPEG-2 system data packets and other transport stream data

packets" is met by packet framer 302 unloading data to PID match unit 304 and local header unit

320, as illustrated in Figure 3 (Movshovich). The claimed "the data unloader delivering the

MPEG-2 system data packets and other transport stream data packets to system memory as

system memory data for processing" is met by data packets transmitted to Sky Queue for

analyzing and transfer to various separate queues in memory (Movshovich 12:62-67).

The claimed a string comparator including "a compare register, the compare register storing at

least one compare value filter" is met by PID match unit including a PID table of 32 PID entries

stored in RAM (Movshovich 7:58-61) wherein PID match unit includes comparators

(Movshovich 9:30-31). The claimed "a masking register, the masking register designating at

least a portion of the compare value filter" is met by PID mask register 362 for obtaining only

the relevant bits for the comparison (Movshovich 8:64 9:24). The claimed "address register" is

met by "[u]nder a match condition, the match capture latch 380 stores the PID location address

from the PID match table 366 (counter 368 value), the match information on line 390, and the

PID attribute bits in the following format to be forwarded to the local header unit" (Movshovich

10:6-10). The claimed "wherein the string comparator compares system memory data from the

data unloader to the designated at least a portion of the compare value filter and stores a

destination address of the system memory data at the address register when the compared system

memory data matches the designated at least a portion of the compare value filter" is met by

"...the counter value on path 384 represents an address index which can be used to address

particular memory queues corresponding to information identified by its PID. The address index

can be used by a processing unit to generate a physical memory address where the particular

transport packet will ultimately be stored prior to transmission to decoding units. The use of the

address index in the local header allows a destination location to be designated without the need

to develop the complete address until it is necessary to actually write the transport packet to its

corresponding memory queue" (Movshovich 9:48-63).

As to claim 21, note the Movshovich and Temple combination teaches a bypassable

demultiplexing system, bypassable synchronizer and bypassable packet parser. The claimed

"wherein the bypassable synchronizer and the bypassable packet parser forward the alternative

transport stream to the packet buffer without performing synchronization or filtering of the

alternative transport stream" is met by where the signal received by a set top box is a narrowcast

signal, the MPEG-2 TS demultiplexor receives from the ATM termination and data extraction

unit, an MPEG-2 transport stream which contains data corresponding to the required video,

audio etc signal only…the MPEG-2 TS demultiplexor does little more than simply pass the data

from its input to its output" (Temple [0034]). The claimed "means for loading the alternative

transport stream into the system memory from the packet buffer" is met by bypassed packet

buffer as discussed in the rejection of claim 210 wherein the data packets are analyzed and

transferred to various separate queues in memory 808 (Movshovich 12:62-67). The claimed

"means for performing real time filtering of the alternative transport stream in the packet buffer

before loading the alternative transport stream into the system memory from the packet buffer" is

met by data packets transferred from the Sky Queue to the appropriate queue by the Transport

DMA controller 804 based upon a set of instructions created by the host processor 801

(Movshovich 13:3-11)) wherein the appropriate queues 808 comprise video and audio queues as

illustrated in Figure 8 (Movshovich) wherein it is inherent that the video, audio, etc. signal

passed through the transport demultiplexor be filtered in order to determine the appropriate

queue for storage in system memory.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny Ma whose telephone number is (571) 272-7351. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jm

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